

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 **Claim 1 (previously presented):** A network apparatus for communicating multi-media
2 information by mobile terminals, comprising:
3 an Internet interface means for establishing an interface with the Internet;
4 a mobile interface means for establishing an interface with a mobile network;
5 a protocol processing means for applying a protocol process to information which is
6 processed by the Internet interface means and the mobile interface means;
7 an image information edit processing means for editing a display characteristic of image
8 information which is extracted by the protocol processing means into image information suitable
9 for a mobile communication with a mobile terminal by thinning the image information, said
10 display characteristic being at least one of a screen size of the image information and a color
11 depth of the image information;
12 a storage unit for storing the image information which is edited by the image information
13 edit processing means;
14 a storage unit controlling means for controlling to store the image information in the
15 storage unit and to read the stored image information; and
16 a transmission timing control processing means for informing the storage unit controlling
17 means of a transmission timing so as to transmit the image information continuously every unit
18 time.

1 **Claim 2 (previously presented):** A network apparatus according to claim 1, wherein
2 the image information which is transmitted/received in respective interfaces of said Internet
3 interface means, said mobile interface means, said protocol processing means, said image

4 information edit processing means, and said storage unit controlling means is communicated in
5 a cellulated format.

1 **Claim 3 (previously presented):** A network apparatus according to claim 1, wherein
2 said mobile interface means includes:

3 a mobile protocol reception processing means for receiving information from the mobile
4 network and then informing the protocol processing means; and

5 a mobile protocol transmission processing means for transmitting information from the
6 protocol processing means and information from the storage unit controlling means to the mobile
7 network via a transmission process.

1 **Claim 4 (original):** A network apparatus according to claim 1, wherein said Internet
2 interface means includes:

3 an Internet protocol reception processing means for performing a communication process
4 of the information received from the Internet and then informing the protocol processing means;
5 and

6 an Internet protocol transmission processing means for transmitting the information
7 received from the protocol processing means to the Internet.

1 **Claim 5 (original):** A network apparatus according to claim 4, wherein said Internet
2 interface means includes an interface for cellulating the information to communicate
3 communication information and the image information when the Internet protocol reception
4 processing means and the Internet protocol transmission processing means communicate with
5 the protocol processing means.

1 **Claim 6 (original):** A network apparatus according to claim 1, wherein said protocol

2 processing means includes:

3 an Internet protocol address analysis processing means for analyzing that the information
4 from the Internet interface means correspond to either of communication information and the
5 image information;

6 an image information protocol processing means for executing a protocol process of the
7 image information from the Internet protocol address analysis processing means;

8 a data reproduction processing means for processing the image information which are
9 protocol-processed by the image information protocol processing means to reproduce original
10 information; and

11 a communication network protocol processing means for protocol-processing the
12 information supplied to the Internet and the mobile network.

1 **Claim 7 (original):** A network apparatus according to claim 1, wherein said image
2 information edit processing means includes:

3 a reproduced data storage unit for storing the image information reproduced by the
4 protocol processing means;

5 a received data managing means for managing writing/reading of reproduced data
6 into/from the reproduced data storage unit; and

7 a reproduced data editing means for editing the reproduced data read from the
8 reproduced data storage unit into a format which is suitable for the mobile terminal.

1 **Claim 8 (original):** A network apparatus according to claim 3, wherein said mobile
2 protocol transmission processing means includes:

3 an asynchronous information processing means for processing asynchronous
4 communication information from the protocol processing means;

5 a synchronous information processing means for processing synchronous image

6 information from the storage unit controlling means;
7 a transmission buffer for transmitting the information to the mobile network; and
8 an information write controlling means for controlling to write the image information
9 from the synchronous information processing means into the transmission buffer prior to
10 communication information from the asynchronous information processing means,
11 whereby the image information processed by the synchronous information processing
12 means are transmitted to the mobile network prior to the communication information so as to
13 allow continuous reproduction of the image information.

1 **Claim 9 (original):** A network apparatus according to claim 1, wherein said storage
2 unit controlling means includes:

3 an edit data split processing means for splitting edited information edited by the image
4 information edit processing means into cellulated information to write them into the storage unit;
5 a storage unit managing means for managing reading process/ writing process from/into
6 the storage unit;
7 a data storage processing means for instructing the storage unit managing means of
8 writing of split data edited by the edit data split processing means; and
9 a data read processing means for instructing the storage unit managing means of reading
10 in response to a reading timing instruction issued from the mobile interface means.

Claim 10 (cancelled)

1 **Claim 11 (previously presented):** A network apparatus for communicating image
2 information between mobile terminals comprising:

3 a mobile interface means for establishing an interface with a mobile network in
4 communication with the mobile network;

5 a protocol processing means for processing protocol of image information from one of
6 the mobile terminals;

7 an image information edit processing means for editing a display characteristic of the
8 image information into edited information suitable for said one of the mobile terminals, said
9 display characteristic being at least one of a screen size of the image information and a color
10 depth of the image information;

11 a storage unit for storing the edited information; and

12 a storage unit controlling means for controlling to store the edited information into the
13 storage unit and to read stored edited information.

Claim 12 (cancelled)

1 **Claim 13 (previously presented):** A network apparatus comprising:

2 a mobile interface means for establishing an interface with a mobile network in
3 communication with the mobile network;

4 a protocol processing means for processing protocol of image information from the
5 mobile terminal;

6 an image information conversion processing means for converting the image information
7 into a common image information format;

8 a storage unit for storing converted image information;

9 a storage unit controlling means for controlling to store the image information into the
10 storage unit and to read stored image information; and

11 an image information custom processing means for editing a display characteristic of the
12 image information read from the storage unit into the image information which is suitable for
13 respective mobile terminals, said display characteristic being at least one of a screen size of the
14 image information and a color depth of the image information;

15 wherein the image information can be communicated between different types of mobile
16 terminals.

1 **Claim 14 (previously presented):** A network apparatus comprising:
2 a mobile interface means for establishing an interface with a mobile network in
3 communication with the mobile network;
4 a protocol processing means for processing protocol of image information from the mobile
5 terminal;
6 a storage unit for storing the image information in a common image information format;
7 a storage unit controlling means for controlling to store the image information into the
8 storage unit and to read stored image information; and
9 an image information custom processing means for editing a display characteristic of the
10 image information read from the storage unit into the image information which is suitable for
11 respective mobile terminals, said display characteristic being at least one of a screen size of the
12 image information and a color depth of the image information;
13 wherein the image information read from the storage unit are supplied constantly to the
14 mobile network to deliver broadcast.

1 **Claim 15 (previously presented):** A network apparatus for communicating multi-media
2 information by mobile terminals, comprising:
3 an Internet interface means for establishing an interface with the Internet;
4 a mobile interface means for establishing an interface with a mobile network;
5 a protocol processing means for processing protocol of information which is processed by
6 the Internet interface means and the mobile interface means;
7 an image information conversion processing means for converting the image information
8 extracted by the protocol processing means into a common image information format;

9 a storage unit for storing the image information converted by the image information
10 conversion processing means;
11 a storage unit controlling means for controlling to store the image information into the
12 storage unit and to read stored image information; and
13 an image information custom processing means for editing and processing a display
14 characteristic of the image information read by the storage unit controlling means to perform a
15 mobile communication, said display characteristic being at least one of a screen size of the image
16 information and a color depth of the image information.

1 **Claim 16 (previously presented):** A network communication method applied to a
2 network apparatus in a network for communicating multi-media information by mobile terminals,
3 comprising the steps of:

4 interface-processing information between the Internet and the network apparatus;
5 interface-processing information between a mobile network and the network apparatus;
6 protocol-processing the information which is interface-processed;
7 edit-processing a display characteristic of the image information which is extracted by
8 protocol process to perform a mobile communication, said display characteristic being at least
9 one of a screen size of the image information and a color depth of the image information;
10 storing the image information which is subjected to edit process; and
11 controlling storing of the image information and reading of stored image information.

1 **Claim 17 (previously presented):** A network communication method according to
2 claim 16, wherein the image information which is transmitted/received is communicated in a
3 cellulated format in an interface with the Internet interface means, an interface with the mobile
4 interface means, an interface when the information which is interface-processed is protocol-
5 processed, an interface when the image information extracted via the protocol process is edit-

6 processed, and an interface when the image information is stored and stored image information
7 is read.

1 **Claim 18 (original):** A network communication method according to claim 16, wherein
2 the step of interface-processing the information between the mobile network and the network
3 apparatus includes the steps of:

4 receiving the information from the mobile network and then informing the protocol
5 processing means;

6 transmitting the information from the protocol processing means and the information
7 from the storage unit controlling means, which controls storage of the image information, via
8 transmission process to the mobile network; and

9 informing the storage unit controlling means, which controls storage and reading of the
10 image information, of a transmission timing so as to transmit the image information continuously
11 ever unit time,

12 whereby continuous reproduction of the image information for the mobile network can
13 be achieved based on such information of the transmission timing to the storage unit controlling
14 means.

1 **Claim 19 (original):** A network communication method according to claim 16, wherein
2 the step of interface-processing between the Internet and the network apparatus, includes the
3 steps of:

4 performing a communication process of the information received from the Internet and
5 then informing the protocol processing means; and

6 transmitting the information received from the protocol processing means to the Internet.

1 **Claim 20 (previously presented):** A network communication method according to

2 claim 19, wherein the step of interface-processing between the Internet and the network
3 apparatus, includes the steps of:

4 cellululating communication information and the image information which is
5 communicated between the protocol processing means and the Internet, when the information
6 received from the Internet is communicated and transmitted to the protocol processing means and
7 also the information received from the protocol processing means is transmitted to the Internet.

1 **Claim 21 (previously presented):** A network communication method according to
2 claim 16, wherein the step of protocol-processing the information being interface-processed,
3 includes the steps of:

4 determining that the information which are interface-processed correspond to either of
5 communication information and the image information to the mobile network;

6 protocol-processing analyzed image information;

7 processing the image information which is protocol-processed to reproduce original
8 information; and

9 protocol-processing the information supplied to the Internet and the mobile network.

1 **Claim 22 (previously presented):** A network communication method according to
2 claim 16, wherein the step of edit-processing the image information which is extracted by
3 protocol process to perform a mobile communication, includes the steps of:

4 storing the image information reproduced by the protocol processing means;

5 managing writing/reading of reproduced image information; and

6 editing read reproduced data into a format which is suitable for mobile communication.

1 **Claim 23 (previously presented):** A network communication method according to
2 claim 18, wherein the step of transmitting the information from the protocol processing means

3 and the information from the storage unit controlling means which controls storage of the image
4 information via transmission process to the mobile network, includes the steps of:
5 processing asynchronous communication information from the protocol processing
6 means;
7 processing synchronous image information from the storage unit controlling means;
8 a transmission buffer for transmitting the information to the mobile network;
9 storing processed synchronous image information to be transmitted prior to processed
10 asynchronous communication information; and
11 transmitting the processed synchronous image information to the mobile network;
12 whereby the image information processed by the synchronous information processing
13 means is transmitted to the mobile network prior to the communication information so as to
14 allow continuous reproduction of the image information.

1 **Claim 24 (previously presented):** A network communication method according to
2 claim 16, wherein the step of controlling storing of the image information and reading of stored
3 image information, includes the steps of:
4 splitting edited data which is obtained by editing the image information extracted by the
5 protocol process to perform the mobile communication so as to store the edited data;
6 processing storing and reading of edited data by the storage unit managing means;
7 instructing the storage unit managing means to write edited split data; and
8 instructing the storage unit managing means of reading in response to a reading timing
9 instruction issued from the mobile interface means.

Claim 25 (cancelled)

1 **Claim 26 (previously presented):** A network communication method in

2 communication with a mobile network, comprising the steps of:
3 interface-processing information between a network apparatus and the mobile network;
4 protocol-processing information which is supplied from the mobile terminal and
5 interface-processed;
6 editing a display characteristic of the image information being protocol-processed into
7 edited information suitable for the mobile terminal, said display characteristic being at least one
8 of a screen size of the image information and a color depth of the image information;
9 storing the edited information; and
10 controlling storing and reading of the edited information;
11 wherein the image information is communicated between the mobile terminals.

Claim 27 (cancelled)

1 **Claim 28 (previously presented):** A network communication method in
2 communication with a mobile network, comprising the steps of:
3 interface-processing information between a network apparatus and the mobile network;
4 protocol-processing information which is supplied from the mobile terminal and
5 interface-processed;
6 converting plural types of image information formats into a common image information
7 format;
8 storing converted image information; and
9 reading stored image information and then editing a display characteristic of the image
10 information into the image information which is suitable for plural types of mobile terminals,
11 said display characteristic being at least one of a screen size of the image information and a color
12 depth of the image information;
13 wherein the image information can be communicated between different types of mobile

14 terminals.

1 **Claim 29 (previously presented):** A network communication method in
2 communication with a mobile network, comprising the steps of:
3 interface-processing information between a network apparatus and the mobile network;
4 protocol-processing information which is supplied from the mobile terminal and
5 interface-processed;
6 providing a reading instruction and a reading timing to read stored image information
7 in a common image information format;
8 editing a display characteristic of read image information into the image information
9 which is suitable for respective mobile terminals, said display characteristic being at least one
10 of a screen size of the image information and a color depth of the image information; and
11 broadcasting edited image information by supplying the edited information constantly
12 to the mobile network.

1 **Claim 30 (previously presented):** A network communication method applied to a
2 network apparatus in a network for communicating multi-media information by mobile terminals,
3 comprising the steps of:
4 interface-processing information between the Internet and the network apparatus;
5 interface-processing information between a mobile network and the network apparatus;
6 protocol-processing the information which is interface-processed;
7 converting the image information extracted by the protocol process into a common image
8 information format;
9 storing the image information which is converted into the common image information
10 format; and
11 reading stored image information and then custom-processing a display characteristic

- 12 of the stored image information, said display characteristic being at least one of a screen size of
- 13 the image information and a color depth of the image information.